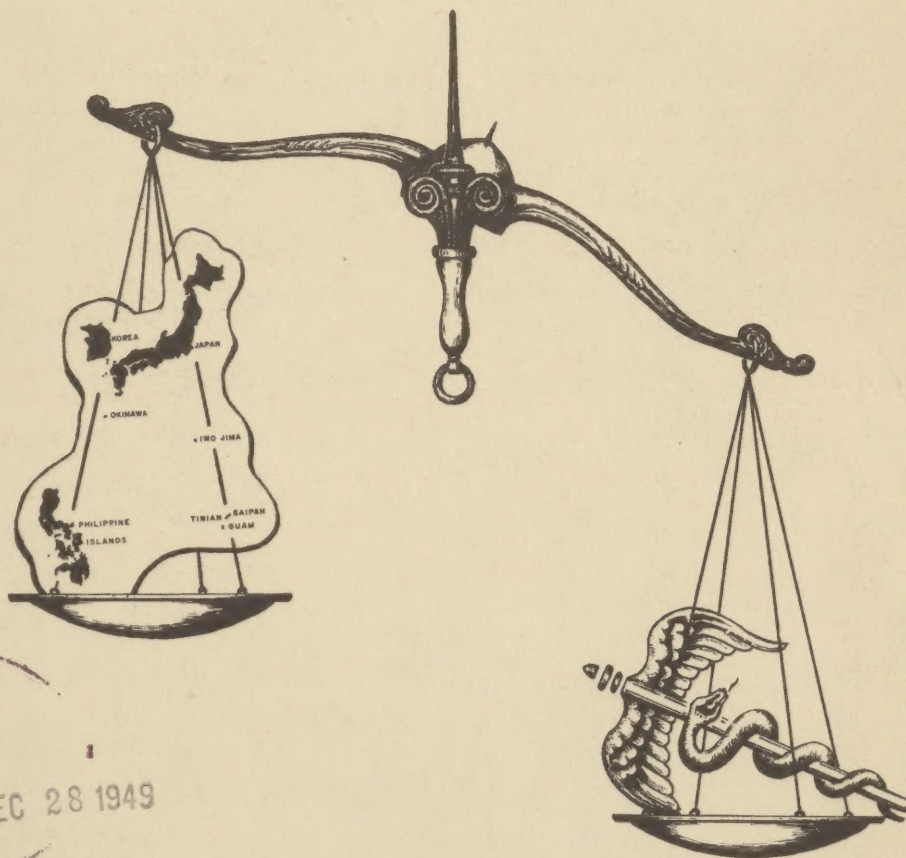


MED. SEC. GHQ. FEC.

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A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

Organization of the Medical Section, GHQ, FEC

The following is a list of commissioned personnel currently assigned or attached to the Medical Section:

Major General Edgar Erskine Hume
Colonel Richard H. Eckhardt, MC
Major James L. LaCombe, MSC

Chief Surgeon
Deputy Surgeon
Executive Officer

ADMINISTRATIVE DIVISION

Lt. Elvis E. Bates, MSC
WOJG Ernie L. Barker

Director
Administrative Assistant
and Chief Clerk

PLANS AND OPERATIONS DIVISION

Lt. Col. Allen J. Blake, MSC
Captain Vincent I. Hack, MSC
Lt. Maurice F. Watson, MSC
WOJG A.H. McIntire

Director
Publications Officer
Plans & Operations Officer
Administrative Assistant

SUPPLY AND FISCAL DIVISION

Lt. Col. E. W. Partin, MSC
Major Glenn C. Irving, MSC

Director
Deputy Director

PERSONNEL DIVISION

Lt. Col. Charles Raulerson, MSC
Captain Vernon H. Loisel, MSC

Director
Deputy Director

CONSULTANTS DIVISION

Colonel Irby J. Pollard, VC
Colonel Robert E. Blount, MC
Lt. Col. A. P. Long, MC
Lt. Col. Harlan H. Taylor, MC
Major Mildred I. Clark, ANC
Major Kermit E. Jones, MSC
Captain E. T. Brown, MSC

Veterinary
Medical
Preventive Medicine
Surgical
Chief Nurse
Sanitary Engineer
Statistics

GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

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NUMBER. 9

1 September 1949

PART IADMINISTRATIVE

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I. Organization of the Medical Section

Departure from the Medical Section, General Headquarters, Far East Command: Captain James D. Grindell, MSC, completed his overseas tour of duty and has departed to the ZI for assignment in the Office of the Surgeon General.

II. Physical Inspections of Troops

Routine monthly physical inspections of troops required by AR 615-250 were discontinued by Department of Army order on 28 August 1948. The instructions to the major commands in the Far East implementing this order included the statement, "pending issuance of further instructions, you will conduct such inspections as conditions in your area require". This contemplates the accomplishment of such physical inspections of troops as are considered necessary by responsible commanders and medical officers in the fulfillment of their obligations and responsibilities in the maintenance of the health and well-being of the troops.

The principal purposes of these inspections are to determine the physical status of those concerned and to detect unsatisfactory conditions of personal hygiene and overt evidence of the presence of unrecognized or unreported communicable and infectious diseases, vermin infestations and skin disorders. Inspections of this nature, while preferably accomplished by a medical officer, may, when necessary, be done by non-medical personnel. Officers of the Medical Service Corps and non-commissioned officers of the Medical Department should be utilized in this capacity when available. When this cannot be done and a troop physical inspection is indicated, the unit surgeon or other officer of the Medical Department should provide the necessary instructions to the non-medical department officers called upon to conduct the inspection. This instruction need not be extensive but should provide sufficient fundamental information to ensure that the inspection is carried out in an orderly systematic fashion and that the necessary observations are made. In the instructions, it should be emphasized that the inspection is not a diagnostic procedure and that all questionable findings are to be referred to a medical officer for further observation.

The type of physical inspections discussed above should not be confused with those which are required by AR 40-210 for known contacts of communicable diseases such as diphtheria, scarlet fever, septic sore throat, measles, mumps, etc. Such inspections should be conducted by a medical officer.

III. Dissolution of Ad Hoc Committee on Medical and Hospital Services of the Armed Forces

By order of the Secretary of Defense, Louis Johnson, the Ad Hoc Committee on Medical and Hospital services of the Armed Forces was dissolved 6 July, the date Dr. Raymond B. Allen assumed his duties as Director of the Medical Services Division. As a further step in unifying administration and operation of the Armed Forces Medical Services, Secretary Johnson established a Medical Services Division within his own office for the purpose of establishing and controlling general policies, standards and programs for the medical services of the three military Departments and related National Military Establishment agencies. The members of the Ad Hoc Committee which had been established in December 1947 have been released from any obligation to serve after its dissolution, however, Dr. Allen will no doubt develop a close working relationship with the three Surgeons General and will rely on them heavily for advice and counsel.

The Ad Hoc Committee on Medical Hospital Services had as its members Dr. Paul R. Hawley who served as Chairman until his resignation on 27 January 1949; Major General Raymond W. Bliss, the Surgeon General of the Army and Chairman since 11 February 1949; Rear Admiral Clifford A. Swanson, Surgeon General of the Navy; Major General Malcolm C. Grow, the Air Surgeon of the Air Force, and Rear Admiral J. T. Boone as Executive Secretary.

The Committee was given the mission of making a thorough, objective and impartial study of the medical services of the Armed Forces with a view to obtaining at the earliest possible date the maximum degree of coordination, efficiency and economy in the operation of these services.

A comprehensive study of the medical hospital services of the Armed Forces has been completed by the Committee. Many of the Committee's recommendations have been implemented and others are in process of implementation. Some of the areas on which the Committee conducted studies included hospitalization; standardization of preventive medicine practices and procedures; medical research; professional services; medical supply; standards of medical nomenclature; and aviation medicine. The National Military Establishment will benefit greatly by these and other studies of the Ad Hoc Committee on Medical and Hospital Services of the Armed Forces.

IV. Military and Civilian Intern Programs

Of the 486 medical school graduates and senior medical students selected by the Surgeon General of the Army for the Military Intern and Civilian Intern programs, 231 medical school graduates of the Military Intern program have been assigned to Army general hospitals and 255 senior medical school seniors chosen for the Civilian Intern program have been assigned to civilian hospitals.

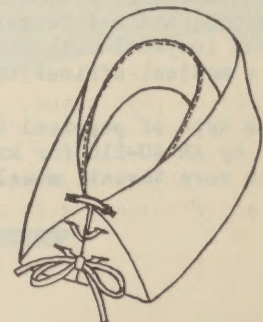
V. White Hospital Uniform for Women Officers of the ANC and WMSC

Special Regulations No. 600-37-1, contains the following information concerning white hospital uniforms for women officers of the Army Nurse Corps and Women's Medical Specialist Corps:

"The white hospital uniform for members of the Army Nurse Corps and Women's Medical Specialist Corps is authorized for wear immediately, but will not be required for wear prior to 1 July 1950. This uniform will not be available from the Quartermaster Corps until such time as it becomes the required uniform, but may be purchased commercially. Personnel purchasing the white uniform will be held responsible that the uniform conforms to United States Army specification.

"Design - (1) Cap, cotton, white, nurses' (fig 1):

Of adopted design, a one-piece hospital cap with self-lacing in the back.

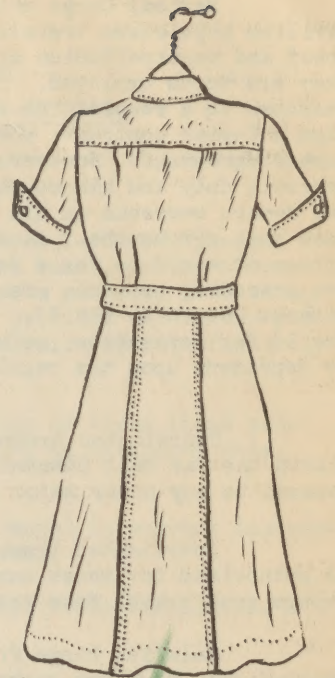
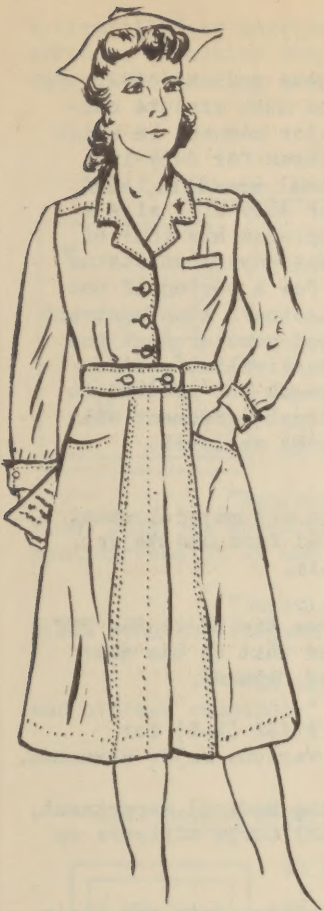


(2) Uniform, cotton, white, nurses' (figs. 2 and 3):

Of adopted design, a one-piece, open-front style with shoulder yoke; set-in waist band; tailored, notched lapel collar; waist closing with three 30-ligne pearl buttons; a separate belt, $2\frac{1}{2}$ inches in width, fastening with two 30-ligne pearl buttons; a false breast pocket on the left side; long sleeves with french cuff, or short sleeves with pointed cuff, both fastening with plain gold or pearl cufflinks; seven-gore skirt, the fly front closing with small removable buttons; and two pockets set into the skirt panels.

"Adopted standards of cloth - (1) Fabric: Two-ply combed cotton poplin, 4-ounce; or 2/1 combed cotton twill, 5-ounce: (2) Color: White.

"Insignia: Insignia of grade and insignia of the Army Nurse Corps or Women's Medical Specialist Corps will be worn on the white hospital uniform as shown in figure 2.

VI. Employment of Civilian Physicians in the Far East Command

Due to the critical shortage of Medical Corps officer personnel in the FEC, the Commander-in-Chief, Far East, has announced a new policy for the employment of civilian physicians to fill vacancies considered appropriate by the Surgeons of the major Commands. The major commands have been authorized to requisition civilian physicians from the ZI through Civilian Personnel channels and to accept for civilian employment non-regular Medical Corps officers scheduled to return to the ZI for separation from the service upon expiration of their current category commitments. It is believed that the recruitment of civilian medical personnel will materially alleviate the heavy medical workload in the FEC and assist in maintaining the high standard of medical service as established by the Medical Department.

Civilian physicians are subject to the rules and regulations applicable to Department of the Army civilian personnel serving in this command. Civilian Personnel officers in the headquarters of the major commands are familiar with these rules and regulations and should be consulted concerning details of employment, tenure of contracts, transportation agreements, etc. In general, the following criteria will govern.

Non-regular medical officers scheduled to return to the ZI for separation from the service upon expiration of their current category commitments may:

(a) Be separated from the service in their present station overseas and accept employment as civilian physicians. Such employment may be in their present positions, or any other suitable positions, as determined by the Surgeon of the major command.

(b) Be separated from the service in their present station overseas and transfer to any other major command within the FEC for duty as civilian physicians. Such transfer may be ac-

complished from any, to any, or within any of the major commands in the FEC.

Medical Corps officers who have converted to a civilian physician status and any other civilian physicians travelling to the FEC to fill positions in any major command must execute contract and transportation agreements for the minimum period applicable to the major command in which they are to be employed. Therefore, an individual who travels from the ZI to Japan for duty in response to a requisition submitted by a major command, through civilian personnel channels, will sign a 2-year contract; whereas an individual travelling from the ZI to Guam for duty will sign a 1-year agreement. However, if a non-regular Medical Corps officer, who has completed his tour of overseas duty and his current category commitment, desires to convert to civilian physician status and remain overseas in his present station he may execute a contract agreement for a period of not less than six months. Should he desire to transfer from one major command to another, such contract agreement would be for a period not less than 1 year. It should be borne in mind however that the two preceding provisos are applicable only when a service individual converts to civilian status without return to the ZI. If an officer indicates a desire for civilian employment but returns to the ZI for separation, no matter for how short a period, the length of his contract agreement will be dependent upon the regulations governing the major command in which he is to be employed.

Coordinated travel of dependents of civilian physicians from the ZI to any major command within the Far East Command is authorized. In addition such travel is authorized from one major command to any other major command within the FEC, providing housing is available.

Coordinated travel of dependents of civilian physicians travelling from the ZI to the FEC is authorized for those employed in Japan or the Philippines. It is anticipated that in the near future such travel from the ZI will be authorized for those employed in Guam and Okinawa.

Salaries range from \$6235 (P-5) for practitioners, general duty, and \$7432 (P-6) for specialists, plus the overseas differential which has been established for the various major commands.

In addition to the procurement of civilian physicians for duty with the Medical Department, FEC, the following provisions have been established to retain non-regular Medical Corps officers on duty in the Medical Department, Army-wide:

Non-regular medical officers who have completed their tour of overseas duty and their current category commitment and are scheduled to depart the FEC for the ZI for separation from the service may submit a request through channels to CINCFE for extension of category commitment and request transfer to a specific locality, provided they agree to extend their tour of service for an additional year.

(1) Such officers may extend their category commitment and continue to serve in their present locality overseas.

(2) Such officers may extend their category commitment and transfer to another major command within the FEC.

(3) Such officers may extend their category commitment and request transfer to another overseas command, i.e., from the FEC to the European Command, via travel through the United States.

(4) Such officers may extend their category commitment and request assignment to a ZI station hospital or a non-teaching hospital.

(ED's NOTE: Authority for the above provisions is contained in a letter from the Office of the Surgeon General, dated 25 April 1949. Copies of the letter were dispatched to the Surgeons of the major commands, FEC. See Surgeon's Circular Letter, Vol IV, No. 7, 1 July 1949.)

VII. Physical Evaluation; Hospitalization; Disposition - for Officers

Information and procedures relative to the hospitalization, physical evaluation to determine physical fitness and disposition of officers and the disposition of cases of this type are contained in SR 605-240-1-APR 36-13. Physical fitness includes both physical and mental capacity for

active military service. The regulations apply to all Army and Air Force commissioned and warrant officers on active duty, both Regular and Reserve, except reservists on active duty training tours under the training program for Reserve components.

VIII. Plasma, Normal Human, Dried (Medical Stock Nos. 1-607-100 and 1-607-104)



Department of the Army Circular 88 and Air Force Letter 160-26, dated 24 June 1949 is quoted below for the information of personnel concerned:

"Pending receipt of new or reprocessed stock Nos. 1-607-100 plasma, normal human, dried, 250 cc, and 1-607-104 plasma, normal human, dried, 500 cc, installation medical personnel are authorized to use stocks on hand, even though the expiration date on the label or package has passed, provided the rubber stopper and tubing are in good condition and mixture with solution is satisfactorily effected.

"Medical supply depots are authorized to issue outdated stocks of these items provided physical appearance is satisfactory, after exhaustion of stocks bearing an unexpired date, pending receipt of new or reprocessed stocks.

"Unsatisfactory stocks of these items will be handled as directed in current instructions from the Surgeon General's Office for disposal of excess Red Cross items.

"The above instructions apply to zone of interior Army and Air Force installations and oversea commands."

IX. Recent Department of the Army and FEC Publications



AR 40-605, 20 Jun 49 - Medical Service, Neuropsychiatry

AR 40-530, 11 Jul 49 - Medical Service: Hospitalization and Evacuation

DA CIR 83, 15 Jun 49 - Medical Dept Officers - Promotion upon Relief from Active Duty, Sec IV

DA CIR 88, 24 Jun 49 - Plasma, Normal Human, Dried (Medical Stock No. 1-607-100 and 1-607-104) - (See Sec. VIII, above)

DA CIR 89, 1 Jul 49 - Rates for Treatment in Army Medical Facilities during Fiscal Year 1950. Sec VII

DA G.O. 30, 27 Jun 49 - Medical Installation Discontinued

DA G.O. 32, 6 Jul 49 - Sec II. Army Institute of Pathology, Washington 25, D.C. Redesignated Armed Forces Institute of Pathology, an Independent Activity Under Control of Surgeon General, DA, etc.

JAAFAR 1-11-63, 29 Jun 49 - Implementation of Programs for Hospitalization in the Armed Forces and for Improvement in the Utilization of Existing Hospital Facilities in Alaska

SR 725-10-2, 8 Jun 49 - Issue of Supplies and Equipment. Processing Requisitions

SR 40-590-75, 10 Jun 49 - Medical Service: Ward and Mess Attendant Training for Civilian Personnel

SR 715-5-20, 13 Jun 49 - Procurement of Supplies and Equipment: Small Purchases Procedure

SR 325-10-1, 16 Jun 49 - C-3: List of Approved Recurring Reports. Page 10, Medical Dept

SR 40-530-1, 17 Jun 49 - Medical Service: Medical Regulating within Army Areas

SR 40-10-5, 30 Jun 49 - C-1: Utilization of Personnel and Treatment Facilities

SR 40-505-10, 1 Jul 49 - Medical Service: Civilian Medical Attendance for Air Force Personnel

SR 40-515-1, 1 Jul 49 - Hospitalization of Army Patients in Naval Medical Facilities

SR 40-510-10, 1 Jul 49 - Medical Service: Civilian Dental Attendance for Personnel of the Air Force

SR 40-1715-10, 1 Jul 49 - Medical Service: Blood for Transfusion and Other purposes - provisions applicable to Air Force Installations, activities, hospitals or personnel

SR 140-210-10, 1 Jul 49 - ORC; Active Duty - Periods less than 30 days - Certain Medical Department Officers

SR 350-110-10, 1 Jul 49 - Education and Training: Common subjects Branch Advanced Courses, School Year 1949-50. Medical, Page 6

SR 605-60-41, 8 Jul 49 - Officers: Dental Officer Procurement - Senior Student Program

SR 40-590-43, 11 Jul 49 - C-1: Admission and Treatment of Merchant Seamen in Medical Facilities of Department of the Army outside Continental U.S.

SR 730-5-1, 15 Jul 49 - Oversea Supply: Distribution

SB 38-7, 13 May 49 - C-4: Regulated Items. Par 3 c. Addition

T/O&E 11-25, 3 Jun 49 - Signal Construction Battalion. Sec III. Page 6. Medical

GHQ FEC CIR 34, 7 Jul 49 - Casualty Reports: Seriously Ill; Death; Line of Duty; Casualty Symbols. Rescinds FEC CIR 13, 31 Jan 47 and FEC CIR 96, 1 Oct 47

PART II

TECHNICAL

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X. Penetrating Wounds of the Abdomen - Lt. Col. Harlan H. Taylor, MC, Surgical Consultant, GHQ, FEC

One of the most vulnerable regions of the human body is the abdominal cavity. Prior to the introduction of gunpowder and firearms there were relatively few cases of penetrating abdominal injuries although wounds of the abdomen have occurred since the early days of lances, swords, daggers and arrows.



In the evolution of our modern civilization, penetrating wounds of the abdomen with a resultant high mortality rate have occurred not only from our advanced deadly weapons and high velocity missiles, but from the very tempo of our every day lives. Although the diagnosis and treatment of early abdominal wounds would be of interest, this paper will be confined to the subject of abdominal wounds as of the present time.

The factor of great importance in the cutting down and lowering the mortality rate from the previously high figures of only a few years ago is the establishment of a more precise pre-operative diagnosis in these cases. In pre-operative diagnosis of intra-abdominal injury, wounds of chest, the back, the perineum, and the thighs, must also be evaluated. For this reason an orderly method of diagnosis should be carried out.

The greatest aid to diagnosis is the determination of the course of the missile. These steps are evaluation of the general condition and complaint of the patient. A rapid survey of the patient's shock condition, the condition of heart and lungs, and the sensorium is made. Urine and stomach contents are examined grossly for blood. The rectum is digitally examined in all wounds of the lower abdomen, pelvis or buttocks, and the presence or absence of blood is noted. An x-ray for localization is made as soon as possible.

After this routine has been carried out we then ask ourselves the questions: (1) Has the peritoneal cavity been perforated?, (2) Is there a possibility that some intra-abdominal catastrophe has occurred?, (3) What structures, intraperitoneal or adjacent are or could be involved?.

By being able to trace the course of the missile one may gain more information than by any other means. Actually, no place on the body is completely exempt as a possible wound of entrance into the abdomen.

In the main, it can be assumed that all missiles maintain a straight course through soft tissues. Bony structures may deflect a missile but it is surprising how frequently the fragment passes directly through bone, maintaining its course unaltered.

When velocity is completely lost, the fragment may come to rest at the most dependent portion of a serous cavity. The attitude of the patient's body at the time of injury has always been very important in arriving at a diagnosis and finding.

In perforating wounds, it is well to know which is the wound of entrance and which the wound of exit. There is nearly always more tissue damage on exit, both to the deeper structures and to the skin. Hence, the wound of exit is larger and there is a greater probability of visual damage in its vicinity.

Among the factors influencing the appearance of the patient are the number and severity of the wounds, the amount of hemorrhage and shock, the time elapsed since injury or time lag, as it is called, and prior treatment. Therefore, the condition of a patient with no abdominal injury may appear critical in contrast to that of a patient who, although appearing well, has definite intra-abdominal pathology. As the patient responds to treatment for shock, one gathers more information. His statements concerning abdominal pains are then worth considering but must be weighed along with all other findings. Yet complaint of abdominal pain does not necessarily point to intra-abdominal pathology, for wounds of the abdominal walls on adjacent structures may be extremely painful and simulate intra-abdominal injury.

For a wounded patient, palpation of the abdomen is important chiefly for the demonstration of rigidity. Nearly every abdomen containing appreciable amounts of free blood or free gastrointestinal contents will demonstrate rigidity. Nearly all wounded patients have received morphine prior to admission to the hospital. Rigidity, however, is not affected by narcosis to the same degree as is tenderness. Thus, tenderness and rebound tenderness are valuable but depend on the time factor, the damage to the abdominal wall and adjacent structure and the individual's personal equation more than does rigidity. The renal region should be palpated, but tenderness there does not in itself signify renal damage. Few abdominal signs or symptoms may be present with hemorrhage or spillage retroperitoneally or into the lesser abdominal cavity. It is not at all unusual to find a badly lacerated spleen in a patient in whom abdominal examination has shown nothing significant. Severe abdominal rigidity may occur without any intra-abdominal pathologic change. This is particularly true in wounds which damage the hip, the pelvis or the spine. Therefore, abdominal rigidity is a very important factor in diagnosis but not in itself conclusive.

I only want to mention digital examination of the rectum in that it also is an important diagnostic aid as rectal palpation contributes a great deal of information. A tear of the rectal wall or an adjacent foreign body may be palpable. If the course of the missile suggests rectal damage, the pressure of blood on the palpating finger is confirmatory evidence.

Catheterization gives valuable information for any wound which may involve the genito-urinary organs. The gross and microscopic appearance of the urine aids in diagnosing injuries of the bladder and kidneys. Hematuria is evidence of damage to the genito-urinary tract, but its absence does not eliminate such damage. When there is a doubt concerning a laceration of the bladder, the bladder may be emptied by catheter, after which a measured amount of sterile isotonic saline is introduced to determine whether it can all be immediately withdrawn.

Auscultation of the abdomen - the presence or absence of peristaltic sounds has considerable significance, though there is no absolute rule. When sounds are present there is not likely to be any perforation of a hollow viscus, though intestinal rumblings and sounds may be heard, when there is a small hole in the pelvic or sigmoid colon. Yet absence of sounds is very suggestive of perforation of hollow viscera, but auscultation should be repeated at frequent intervals, especially if there is no rigidity and if other signs - such as those of hemorrhage - are absent. A blow in the stomach, or exposure to blast, may cause peristalsis to cease for an hour or so, after which it starts again.

The x-ray is another valuable adjunct in the diagnosis and treatment of this type of wound in locating the foreign body, or the course of the missile can be studied and treated accordingly.

Thus summing up the diagnostic steps as to what procedure one should follow as I have briefly tried to do, I would say the prime consideration is plotting the course of the missile, inspection, palpation and auscultation. Then comes the all-important question in the minds of the surgeon, "When to operate". Everyone agrees that patients with abdominal wounds need operation as early as possible if they are to have the best chance, but too literal an interpretation of that phrase "as early as possible" may result in bad judgment if a thorough pre-operative diagnosis is not done and all signs, symptoms and diagnostic aids carefully evaluated. Jull, in his book Field Surgery in Total War states that "today there can be no excuse for conservative treatment of abdominal gunshot or penetrating injuries" and that surgical intervention is therefore advised in all cases except (1) The one in which general peritonitis is well advanced; (2) Those failing to show evidence of hollow viscus perforation and in which there is not enough blood loss to endanger life; (3) The moribund cases.

Proved sound surgical principles nowhere find greater application than in the technical problems usually encountered in the treatment of abdominal wounds.

While exploring the peritoneal cavity, an attempt is made to retrace the course of the missile. Radical shifts in position of viscera, particularly small bowel, that may occur subsequent to passage of the missile through the peritoneal cavity should be kept constantly in mind. If there has been severe hemorrhage rapid search is made for its course and the bleeding vessels ligated. Any apparent gross perforation of the colon is isolated as completely as possible in order to minimize contamination. If small bowel perforation is likely, the entire intestine is systematically explored from proximal jejunum to terminal ileum. Each perforation is tagged with an Allis's forceps and careful count is kept. Finding an "odd" number of perforations must be explained. Careful search is made for perforations between the leaves of the mesentery which are likely to be overlooked and are troublesome to close. The ascending and descending colons are mobilized and their posterior surfaces inspected if perforation from behind is at all likely. In the same way the duodenum is mobilized by lateral incision and retracted medially to expose its posterior surface. The posterior surface of the stomach is exposed through the avascular gastrocolic omentum or through the transverse mesocolon. I mention these sites as they are the most likely overlooked areas.

Time does not permit describing the difficult operative procedures within the abdominal cavity, therefore only a few important procedures will be mentioned briefly. With perforation of the small bowel I prefer an end-to-end anastomosis chiefly because it can be done more rapidly; an open, two layer anastomosis by use of nonabsorbable sutures in the serovascular layers and, I think this is important, to remove a greater portion of the bowel at the antimesenteric border as this gives a lumen of a greater size.

Dealing with the large bowel is somewhat different. First, it is known that contamination of the peritoneum by colon contents is the single most lethal factor producing death in abdominal wounds. Thus the principle of exteriorization of lacerations of the colon is particularly adaptable to this type of wound, even the smallest perforation of the colon is usually surrounded by an area of ecchymosis which, when seen in the exteriorized loop, invariably undergoes necrosis and sloughs to the very margin of the ecchymotic area. The difficulties of estimation of the extent of this necrosis make simple closure of these lacerations hazardous. In addition, exteriorization accomplishes decompression.

With penetrating and lacerating wounds of the liver first, of course, control excessive hemorrhage either by hot sponges or use of a piece of muscle taken from the abdominal wall. If at all possible do not pack with gauze to control hemorrhage for it has been shown that these packs become a medium of infection, forming a sinus, and are very difficult to remove. Also, secondary hemorrhage may follow their removal. To my mind, regardless of the size of the lesion, the most important consideration is drain the bile, to the outside, as bile in the peritoneal cavity is a serious type of peritonitis and makes for a serious complication and many times death.

I only want to mention one striking feature of wounds of the spleen. The penetrating or gunshot wounds of the spleen differ from the usual closed traumatic rupture of the spleen in that, unless there is a penetration of the great vessels near the hilum of the spleen they do not continue

to bleed and no satisfactory explanation for this has yet been given. In extensive lacerations, fragments of the spleen in the thorax or free in the peritoneal cavity are sometimes seen. There is usually considerable free blood in the peritoneal cavity, but the spleen itself at operation is either not bleeding at all or gently oozing.

In summarizing I will give the important factors in the management of these penetrating wounds of the abdomen as they are agreed upon by the recent literature from civilian sources as well as the observations during recent World War II. The improvement in the mortality rate is largely explained by the following factors:

1. The treatment of shock and the availability and use of plasma and blood.

2. A more precise pre-operative diagnosis in these cases.

3. Improved surgical methods and techniques which also should include the improved facilities for the preoperative and postoperative treatment in these cases, such as the improved method of gastrointestinal drainage and decompression by the Miller-Abbott, Levine and Waggensteen tubes, also a better understanding of the importance of a proper fluid and electrolyte balance.

4. The judicious use of chemotherapeutic agents.

XI. Observations on External Otitis - Lt. Col. Harlan H. Taylor, MC, Surgical Consultant, GHQ, FEC and Capt. Max J. Fischer, MC, Chief, EENT Section, 49th General Hospital, Tokyo, Japan

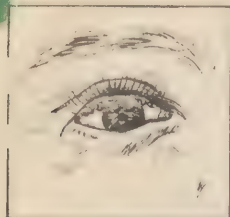


During the past six weeks an increasing number of patients, all with the same complaint of external otitis, have been seen in EENT Clinics. It has frequently been observed that a great many of these patients had been seen previously in their unit dispensary and had received their primary therapy at that level. This primary treatment usually consisted of aural irrigations, local therapy with resatin drops or salicylic acid in alcohol drops, and in many cases I.M. penicillin. Apparently this form of therapy had not been completely satisfactory because it allowed the external auditory canal to remain moist.

A routine has been started at the 49th General Hospital for the treatment of External Otitis with very favorable results. The following is an outline of the proposed therapy.

1. The canal is wiped dry with small cotton applicators.
 2. A small cotton wick of cresatin (Metacresylacetale) is placed in the ear canal and allowed to remain for 24 hours.
 3. After the cresatin wick is removed the canal is again wiped dry and then dusted with a powder made up of 50% penicillin crystals and 50% sulfanilamide crystals, not Sulfa Powder.
 4. The dry wipes and dusting is repeated at 48 hour intervals over a period of about one week or until the infection is controlled.
 5. The patient is cautioned to keep the ear dry as we believe this is of prime importance.
 6. There is only one exception to this S.O.P. If on the first visit the ear canal is edematous and swollen shut a cotton wick of 1% Silver Nitrate is placed in the canal and allowed to remain for 24 hours. Then the standard routine as outlined above is begun.
-

XII. Program for Trachoma Control, Kyoto Prefecture, Honshu, Japan, 1948 - 1949 - Captain John D. Glismann, MC



Early in 1948, the Japanese Department of Health of the Prefecture of Kyoto began work on plans for a state-wide drive against trachoma. Kyoto Prefecture, a population area of 1,700,000 people, like every other prefecture of post-war Japan, is under the supervision of an American Civil Affairs Team. The Japanese departments of health come within the scope of Civil Affairs operations and are under the direct supervision of American military or civilian medical officers. The trachoma program as with any other major program was a joint planning effort of Japanese and American personnel.

Japanese physicians have for years been aware of the high incidence of trachoma among their people. For the nation as a whole an incidence of five to ten percent is commonly estimated, but it was well known that certain areas of every major city were infected at levels approaching one hundred percent.

The better educated classes of Japan, as would be expected, have an intelligent concept of this disease, but among their less fortunate countrymen, superstition is the rule. "Trâ-hom" (as it is pronounced in Japan) is considered by many to be the direct result of eating meat from a cat, dog, or horse. Among the ETA class (the fourth or lowest class of Japanese society), trachoma is so common that it is considered a characteristic stigma of the class itself. In one of the northern prefectures of Japan, a god had been erected to this disease, and cure was said to result when the finger of the patient was wiped first across his own eye and then across the eye of the god. The god apparently did an excellent business until the health department, over the protests of the populace in general and the priests in particular, put an end to his activities some years ago.

In organizing a program of trachoma control, community action under the direction of the health department was to be the theme. Professors, school principals and teachers, municipal and prefectural authorities, private physicians, PTAs, ophthalmologists, welfare officials, and private citizens were contacted. The aims of the committee on trachoma control, which was organized out of these various groups, was (1) to provide a method by which trachoma could eventually be eliminated from this prefecture and (2) to suggest a pattern which might be of value on a national scale.

With severely limited finances, it was obvious that the prefectural government could not expect to finance the treatment of even a small percentage of the estimated 180,000 cases. It was therefore determined that a full scale program would be conducted in one representative primary school of each of the twenty-four health center districts*(1). Each of these drives would be designed to achieve the maximum advertising and educational value possible, with the intention of increasing the interest and understanding of the private citizen and private physician.

In addition to the educational aspects of each individual program, state-wide education was planned. The professor of ophthalmology of the Kyoto Prefectural Medical College prepared a paper on the clinical symptoms of trachoma, including a description of MacCallum's classification of the disease, for distribution to physicians throughout the prefecture. Among the educational measures aimed at the general public were (1) a trachoma-slogan contest which was sponsored in the schools, (2) six thousand posters on trachoma, printed by the health department for distribution to schools, health centers, bath houses, and food distribution points, (3) articles on trachoma in newspapers, medical journals, and children's magazines and (4) street broadcasts, radio broadcasts, and film strips.

The three trachoma drives which are the subject of this report were conducted in the following manner: (1) In the schools selected for survey and treatment, the school faculty in conjunction with the district health center prepared the local educational program. The local PTA groups were extremely valuable in this regard. (2) A trachoma team, consisting of ophthalmologists, nurses, and clerks from the Kyoto Prefectural Medical College, conducted the examination of children and general citizens on specified days as arranged by the school authorities. (3) School nurses, hospital nurses, and health center nurses were enlisted to supervise the use of the medicines.

The following protocol considers the results achieved in the first three schools selected for this work:

* (1) comparable to county divisions

PROTOCOL

1. Sonobe Primary School, Sonobe Town, Funai-gun*(1), Kyoto Prefecture
2. Yosei Primary School, Sakyo District, Kyoto City, Kyoto Prefecture
3. Yoshiwara Primary School, Maizuru City, Kyoto Prefecture

- A. Results of Survey
- B. Drug and Method of Use
- C. Results of Treatment

In results of survey (A) and results of treatment (C), itemized percentages are recorded in nearest one-tenth of one percent. In total percentages, fractions of one percent are not recorded.

In results of treatment only those cases who conscientiously reported for observation are considered.

I. Sonobe Primary School, Sonobe Town, Funai-gun, Kyoto Prefecture

A. Results of Survey:

	Total		Pre. School		School		Adults	
Number of Examinations	2,104		605		1,349		150	
Diagnosis	No. %/2104		No. %/605		No. %/1349		No. %/150	
Tr. Dubium	46	2.2	12	2.0	22	1.6	12	8.0
Tr. Acutum	3	1	1	.2	2	.1	0	.0
Tr. I	53	2.5	19	3.1	22	1.6	12	8.0
Tr. II(a)	39	1.9	3	.5	25	1.9	11	7.3
Tr. II(b)	10	.5	1	.2	5	.4	4	2.7
Tr. III	15	.7	1	.2	5	.4	9	6.0
Tr. IV	22	1.0	0	.0	0	.0	22	14.7
Total	188	9%	37	6%	81	6%	70	47%

(NOTE: The adults examined in this survey were parents and relatives of infected children.)

B. Drug and Method of Use:

American Sulfathiazole (Squibb and Sons)

*(1) synonymous with "county"

0 - 2 years. 0.5 gm / pt / day
 3 - 4 years. 1.0 gm
 5 - 10 years 1.5 gm
 11 - 13 years 2.0 gm
 14 - 16 years 2.5 gm
 Over 17 years 3.0 gm

Sulfathiazole was given in divided doses every four (4) hours with equivalent amounts of soda bicarbonate and liberal fluids (6-10-2-6-10-2). Medication was given for one week alternating with a week of rest, until a total of three weeks of treatment had been given.

C. Results of Treatment:

Diagnosis	Total Treated	Cured		Marked Effect		Slight Effect		No Effect	
		No.	%	No.	%	No.	%	No.	%
Tr. Dubium	37	14	37.9	10	27.0	2	5.4	11	29.7
Tr. Acutum	3	0	0.0	3	100.0	0	0.0	0	0.0
Tr. I	42	16	38.1	16	38.1	2	4.8	8	19.0
Tr. II(a)	34	11	32.4	16	47.1	5	14.7	2	5.9
Tr. II(b)	4	2	50.0	2	50.0	0	0.0	0	0.0
Tr. III	10	1	10.0	3	30.0	5	50.0	1	10.0
Tr. IV	1	0	0.0	0	0.0	0	0.0	1	100.0
Total	131	44	34%	50	38%	14	11%	23	18%

Cured.....34%
 Marked Effect.....38%
 Effective Rate.....72%

II. Yosei Primary School, Sakyo District, Kyoto City, Kyoto Prefecture

A. Results of Survey:

	Total		Pre. School		School		Adults	
Number of Examinations	3,047		63		1,501		1,483	
Diagnosis	No.	%/3047	No.	%/63	No.	%/1501	No.	%/1483
Tr. Dubium	142	4.7	2	3.2	91	9.1	49	3.3
Tr. Acutum	7	0.2	1	1.6	5	0.3	1	0.1
Tr. I	335	11.0	24	38.1	103	6.9	208	14.1
Tr. II(a)	160	5.2	14	22.2	76	5.1	70	4.7
Tr. II(b)	124	4.1	4	6.5	48	3.2	72	4.9
Tr. III	347	11.4	1	1.6	32	2.1	314	21.2
Tr. IV	135	4.4	0	0	0	0	135	9.1
Total	1,250	41%	46	73%	355	24%	849	57%

B. Drug and Method of Use:

Neo-gerison (P-amino-sulfonamide), a sulfanilamide manufactured by the Yamanouchi Drug Company was used. Dosages were the same as those used at Sonobe, though in this case the daily quantity was divided in five (5) portions (6-10-2-6-10). Again the drug was given for one (1) week, alternating with a week of rest until a total of three (3) weeks of treatment had been given.

C. Results of Treatment:

Diagnosis	Total Treated	Cured		Marked Effect		Slight Effect		No Effect	
		No.	%	No.	%	No.	%	No.	%
Tr. Dubium	73	42	57.5	11	15.1	5	6.8	15	20.5
Tr. Acutum	5	2	40.0	2	40.0	0	0.0	1	20.0
Tr. I	143	58	40.6	30	21.0	20	14.0	35	24.4
Tr. II(a)	65	11	16.9	42	64.6	3	4.6	9	13.8
Tr. II(b)	37	14	37.8	21	56.8	1	2.7	1	2.7
Tr. III	26	3	11.5	9	34.6	3	11.5	11	42.3
Tr. IV									
Total	349	130	37%	115	33%	32	9%	72	21%

Cured.....37%
Marked Effect.....33%
Effective Rate.....70%

III. Yoshiwara Primary School, Maizuru City, Kyoto Prefecture

A. Results of Survey:

Number of Examinations Diagnosis	Total 394 Number	School Children Only %394
Tr. Dubium	35	9.0
Tr. Acutum	0	0.0
Tr. I	88	22.3
Tr. II(a)	39	10.0
Tr. II(b)	13	3.3
Tr. III	18	4.6
Tr. IV	0	0.0
Total	193	49%

B. Drug and Method of Use:

Salsol tablets, a Japanese sulfathiazole manufactured by Takeda Pharmaceutical Company, was used in the following manner:

(Four times daily at 8-12-4 and 8)	1st - 2nd grades	1.0 gm/pt/day
	3rd - 4th grades	1.5 gm/pt/day
	5th - 6th grades	2.0 gm/pt/day

The children received two (2) weeks of treatment followed by one (1) week of rest and another week of treatment. The course of therapy was originally scheduled for three (3) consecutive weeks, but because of a large number of minor reactions (88), i.e., fever, headache, rash, a week of rest was given following the second week of treatment. All reactions cleared spontaneously with withdrawal of the drug. For reasons unknown, soda bicarbonate was not used in this program.

C. Results of Treatment:

Diagnosis	Total Treated	Cured		Marked Effect		Slight Effect		No Effect	
		No.	%	No.	%	No.	%	No.	%
Tr. Dubium	35	32	91.4	3	8.5	0	0.0	0	0.0
Tr. Acutum	0	0	0.0	0	0.0	0	0.0	0	0.0
Tr. I	88	64	72.7	20	22.7	2	2.3	2	2.3
Tr. II(a)	39	15	38.5	16	41.0	6	15.4	2	5.1
Tr. II(b)	13	3	23.1	9	69.2	1	7.7	0	0.0
Tr. III	18	6	33.3	8	44.4	3	16.7	1	5.6
Tr. IV	0	0	0.0	0	0.0	0	0.0	0	0.0
Total	193	120	62%	56	29%	12	6%	5	3%

Cured.....62%
Marked Effect.....29%
Effective Rate.....91%

In evaluating charts and figures it is necessary to remember that they are a product of the Japanese system of medicine. To translate accurately the details of "criteria of cure" is not within the scope of this paper. Suffice to say, the Japanese ophthalmologists responsible for this work are well trained conscientious practitioners, who have had a wealth of experience in dealing with this disease. It should be noted, however, that the available American literature regarding the treatment of trachoma with sulfa preparations, is not overly optimistic concerning anticipated results in Stages II and III.

No statistics are available at the present time on the number of cases which have relapsed or been reinfected six (6) months or one (1) year following treatment. Nor has the efficacy of sulfa in conjunction with other accepted forms of therapy (douches, expression of follicles etc.) been investigated to any considerable extent in this prefecture.

DISCUSSION

1. Trachoma is a prevalent disease in all areas of this prefecture, having its highest incidence in the crowded areas of the principal cities (Kyoto and Maizuru) and its lowest incidence in the more rural areas.

2. No conclusions can be drawn from this study as to its incidence in the various age groups, though it is probable that in areas such as Yosei over 90% of the population have the disease sometime during their lives.

3. The largest incidence of cases was found in Stage I. This perhaps would not be the case in accurate sampling of the general population and is attributed to the preponderance of primary school children included in the surveys.

4. Although the total incidence of infection at Yosei and Yoshiwara was forty-one (41) and forty-nine (49) percent respectively, it is probable that the Sonobe incidence of nine (9) percent more accurately presents the average condition in this prefecture.

5. Type of drug used, whether American sulfathiazole, Japanese sulfathiazole or Japanese sulfanilamide apparently made very little difference. The effective rate of treatment (cured, plus

marked effect) was in fact higher at the Yoshiwara Primary School where Japanese sulfathiazole was used. Two factors should be considered in the marked improvement shown at Yoshiwara:

a. Only school children were considered in the survey, consequently the patients could be more effectively controlled.

b. Sulfathiazole was given for 2 consecutive weeks followed by a week of rest at Yoshiwara, whereas in the other programs it was given on alternate weeks. American literature recommends three consecutive weeks of treatment.

6. Better results might have been expected had dosage been calculated on a weight basis rather than on an age or grade basis, i.e., one third to one half grain per pound of body weight per day.

7. Although the best results were achieved in the early stages of the disease, it is effective to some extent in Stage III. It is of considerable interest that in many cases well developed follicles disappeared or were considerably reduced.

<u>Stage III</u>	<u>Cured</u>	<u>Marked Effect</u>	<u>Effective Rate</u>
Sonobe	10.0%	30.0%	40.0%
Yosei	11.5%	34.6%	46.1%
Yoshiwara	33.3%	44.4%	77.7%

With cases in the early stages of the disease, rates of cure of from 40 to 60% can be expected, with rates of effectiveness of 70-90%.

8. To consolidate the gains and insure permanent continuation of this program, this prefecture is establishing ophthalmology clinics in various health centers. At the present time two (2) such clinics are in operation in Kyoto City.

CONCLUSIONS

Sulfa preparations are effective in the treatment of trachoma up to and including Stage III. The aim of such a program should be the education of the general public and improvement of overall attention to diseases of the eyes. On the basis of this report, the following points are emphasized:

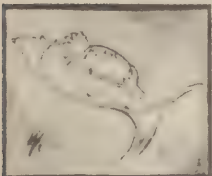
a. On a mass basis the treatment of school children is much more effective since they can be more effectively controlled.

b. Japanese sulfa is quite as effective for the treatment of trachoma as the more expensive American preparations.

c. Sulfa should be given in dosages approximating one-third to one-half grain per pound of body weight per day. Three weeks of continuous therapy is recommended, and apparently the administration of sulfa in 4 equal quantities per day (8-12-4-8) is quite as efficacious as the "around the clock" schedule. Liberal fluids and equivalent amounts of soda bicarbonate should of course be used.

Trachoma control is a legitimate and essential public health program and provides a unique opportunity for prefectural health departments to coordinate the energies of various private and governmental organizations in a worth while community effort. This program serves to stimulate the interest of the general public, not only in trachoma control but in public health activities in general, and is secondarily of considerable value in enhancing the prestige of the prefectural department of health and its health center system.

XIII. Hemorrhagic Teratoma of the Right Ovary Complicated by Appendicitis in a Three Year Old - Lt. Col. Sanford W. French, III, MC, and Capt. William J. Hills, MC, 118th Station Hospital



This case is an unusual one and is being reported because of the fact that the presence of a large palpable mass in the abdomen of a three year old white female obscured and caused a delay in the making of a proper diagnosis of acute appendicitis.

CASE REPORT

CHIEF COMPLAINT: The patient is a three year old white female dependent who entered the 118th Station Hospital on 16 June 1949 with the chief complaint of pain in the abdomen of three days duration.

PRESENT ILLNESS: On 13 June 1949, three days before admission to this hospital, patient developed cramping pains of an intermittent character located in the suprapubic region. This was accompanied by anorexia, but the patient had had no fever nor had she vomited. The following day the patient continued with her intermittent abdominal pains, she ate fairly well, had no fever, but cried a lot. The following day, which was the day before she entered the hospital, she began to vomit and vomited some material which looked like undigested food. During the remainder of the day, she vomited four times.

PAST HISTORY: Patient has had none of the usual childhood diseases, but a cavernous hemangioma was removed from her scalp at the age of eight months with Radium and Carbon Dioxide snow. At birth the patient had a rather severe scleroma which lasted for about two weeks.

FAMILY HISTORY: Mother has diabetes. No other familial diseases.

CLINICAL COURSE: On admission to the hospital the patient was a well developed, well nourished, white female child three years of age in no acute distress. Physical examination was essentially negative with the exception of a globular mass about the size of an orange which was easily palpable in the mid line of the lower abdomen just about the pubis. This mass was slightly tender but could not be moved. On rectal examination the mass was easily palpable between the rectal finger and the examining hand on the child's abdomen. Her temperature was 99.2°, respirations 24 and pulse rate 100. RBC was 2,850,000; Hb, 8.5; WBC, 12, 700 with 62% polys. There was no vomiting and the child spent a rather comfortable night. However, on the day after admission, her temperature had risen to 100.2°, and she was vomiting and quite irritable. That afternoon under drop ether anesthesia this mass was palpated and it appeared to be in the position of the uterus and it was thought by one examiner that from both superolateral poles there were appendages coming off the mass. It was decided at the time that an exploratory laparotomy was in order. She was transfused on the next day with 300 cc of whole blood and spent a rather comfortable day. However, late in the evening the temperature had risen to 102.4°, with a RBC of 3,700,000; Hb, 11.5; WBC, 11,500 with 76% polys. The child was very restless, crying frequently and holding her lower abdomen, and seemed to be in much pain. The febrile reaction was thought to be due to the manipulation of the mass under anesthesia, and the patient was placed on penicillin, 50,000 units every three hours. On this day, a barium enema revealed no defects of the large bowel, and the patient's evacuation film showed a suggestion of a circular mass in the suprapubic region. This mass was easily seen on fluoroscopy and seemed to lie anteriorly within the abdomen. She was scheduled for laparotomy on the morning of 21 June 1949, which was five days after admission to the hospital. In the interval she received an intravenous pyelogram which revealed both kidneys to be in their normal position with normal excretion of the dye. On 21 June, laparotomy was carried out through a right rectus incision under open drop ether anesthesia. When the peritoneal cavity was opened, the first thing that attracted our attention was a large suppurative appendix which appeared to be in a subsiding state. The large mass previously palpated was seen to come off of the right ovary and was about the size of an orange. The mass along with the right tube and ovary were then resected in one piece. The appendix was then removed and the wound closed in layers with interrupted cotton sutures. After the operation, the large mass was opened and was found to contain about 250 cc of old dark blood and a tricuspid tooth, thus confirming the diagnosis of a dermoid cyst. The patient had an uneventful convalescence from her operation and was discharged from the hospital on 6 July 1949.

In retrospect we believe that this child had her symptoms and was brought to the hospital because of an acutely inflamed appendix and that the findings of the mass on physical examination was an incidental finding but was of such nature to delay a correct diagnosis from being made at that time. The anemia present on admission is thought to be due to hemorrhage into the cyst. Had the mass not been present, this patient would have been operated on sooner than she actually was, but, as her symptoms were thought to be due to the mass, operation was deferred until her general physical condition could be made as well as possible.

Karsner classifies dermoid cysts as cystic dermoids and classifies the solid dermoids as teratomas. This mass which was removed was partly solid and partly cystic so that either term would be acceptable. On pathological examination, no evidence of malignancy was found.

XIV. Administration of Oxygen - 1st Lieut. Edna B. Hamel, ANC, 28th Station Hospital

There are three common methods of administering oxygen: (1) Tent; (2) Mask; (3) Catheter.

USE OF AN OXYGEN TENT

The patient's head is enclosed by a tent in which the prescribed

concentration of oxygen and a comfortable degree of temperature and humidity are maintained.

There are also open box tents or canopies of the type that enclose the whole body of infants and small children, or only the head of adults, the top is open. Closed tent-hoods and some open oxygen tents must be connected with a cooling system which never allows the temperature on a thermometer kept within the tent to be more than 10 to 15 degrees F. cooler than outside air in order to prevent chilling the patient. The temperature in the tent should be about 70 degrees F. except during excessively hot weather. This cooling may be done by chopped ice, a refrigeration unit, or dry ice. The cooling unit removes the heat and water vapor produced by the patient and thus maintains a comfortable air-conditioned atmosphere.

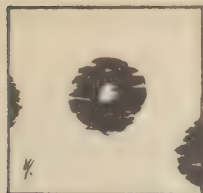
The oxygen concentration in the tent depends upon the liter flow per minute of oxygen delivered from a cylinder attached to a regulator and fed through a rubber tube into the tent near the patient's face. The concentration also depends upon close nursing supervision to prevent loss of oxygen from the tent due to leakage through the mattress or because the canopy is not well tucked in. Oxygen tents can provide an atmosphere containing up to 60% oxygen concentration.

Every canopy tent is accompanied by a set of instructions issued by the manufacturer and these should be carefully read and applied. Some tents are operated electrically and have a motor blower unit to circulate the oxygen as well as a refrigeration unit. The atmosphere of the tent must be periodically tested to determine the oxygen and carbon dioxide content.

ADMINISTRATION OF OXYGEN BY A MASK

The mask method permits the patient to breathe from a face inhaler, and provides the patient with a high oxygen tension (100%, if necessary). Nasal masks covering only the nose are suitable for conscious patients who can eat and talk, while oronasal masks which cover both the mouth and nose are better for unconscious individuals. A cylinder, reducing valve, and flow meter are necessary. No humidifier is used. A breathing bag is attached to the mask, and the oxygen flow must be adequate at all times to prevent the bag from entirely collapsing. The mask must fit properly and be kept firmly strapped to the face.

High concentrations must be avoided over a long period of time. Occasionally a positive pressure mask which has a special expiratory valve is necessary, particularly in the



SEMI-OPEN INHALER

treatment of pulmonary edema, or in the presence of respiratory obstruction as in severe asthma. Here, a tight fitting mask and leak proof system are imperative for success.

ADMINISTRATION OF OXYGEN BY A CATHETER

Administration of oxygen by a catheter is a simple and practical means of increasing alveolar oxygen. The disadvantage is that children or delirious or otherwise uncooperative patients may not tolerate the catheter, and it does not provide high oxygen tension (over 60%).

In introducing the oropharyngeal catheter it is essential that the tip of the catheter be accurately placed in the oropharynx. The tip is first perforated with a number of small holes by running a red hot needle through the terminal one-half (1.25 cm) of the catheter. The proper depth for the catheter can be roughly ascertained by measuring the distance from the ala of the nose to the tragus of the ear. With the oxygen running at 6 liters to the minute, the lubricated catheter is passed into the nose and pharynx until the patient swallows a bolus of oxygen during deglutition. The catheter is then withdrawn to a point at which the gas is not swallowed. It is then firmly fastened to the skin of the nose and that of the forehead or cheek with adhesive tape.

At least every twelve hours the catheter should be withdrawn, cleaned, and inserted on the opposite side. If mucus collects on the catheter or the patient is uncomfortable the catheter must be cleansed more frequently.

The oxygen may be passed through water to moisten it or not, depending on whether the secretions are scanty and dry or plentiful and fluid.

Distilled water is used in the humidifier; the amount should never be higher than the indicated water level or, if there is no water level indicator, the bottle should never be more than half full. Too high a water level may result in a fatality by spraying water into the lungs. The humidifier must be more than just a tube extending into a jar of water. The oxygen must be passed through a diffusion head made of felt, porous metal or some like substance so that the oxygen is broken up into tiny bubbles and thoroughly saturated with water vapor.

Equipment for oxygen therapy is intricate and expensive. Proper care of this equipment is essential if it is to be kept in good working order and potential hazards avoided.

Commercial and medical oxygen are identical chemically except for the cleanliness of the containers and the price.

Because of the very high pressure used in filling all oxygen cylinders, a cylinder must never be dropped or allowed to fall over, for breaking the valve and releasing the gas under enormous pressure can cause fatalities or a disastrous explosion. Oxygen expands with heat so the cylinders must be stored in a cool dry room and be kept away from radiators, hot pipes, or any combustible materials.

Oxygen precaution cards must be hung on the outside of the door of each room where oxygen therapy is stored or in use, and oral warnings must be given as printed signs are not sufficient. Because of the fire and explosion hazard with oxygen, no smoking, sparking devices such as motors, suction machines, switches, heating lamps, alcohol, lamps, heating pads, candles, or cautery are permitted in the vicinity of the oxygen equipment. For the same reason, oil, which is combustible with oxygen, must never be used on oxygen regulators, or alcohol rubs administered in oxygen tents. Inflammable materials such as alcohol, etc., may undergo spontaneous combustion when coming in contact with oxygen. Static electricity as a result of friction from motion of people, gases, blankets, bags, tables, must not be overlooked. Unlike flames, the static spark is not evident and is often remembered too late.

Static charges are developed by friction of two substances against each other. This may occur in removing a blanket, especially woolen blankets, opening and closing the valve of a machine



or from the friction caused by the flowing of dry gases through tubing. Other potential static generators are articles of silk rayon, (nurses are the greatest offenders) or rubber, rubber-soled shoes, woolen trousers (uniforms), etc.

No x-ray or physical therapy equipment can be permitted until the oxygen in the room is reduced to atmospheric concentration. Tents or other devices delivering a high concentration of oxygen must not be used in wards or other places where precautionary measures cannot be rigidly enforced.

A reducing valve or regulator is essential to reduce the high pressure of the gas in the cylinder to a safe delivery pressure. This regulator contains two gauges in addition to the reducing valve. One gauge indicates the amount of oxygen in the cylinder, while the other gauge or flow meter, which is calibrated in liters, shows the rate of flow of oxygen per minute to the patient.

No regulator or reducing valve should be attached to the cylinder without first opening the cylinder valve sharply and briefly while the outlet is pointed away from any individual present. This blows out any dust, dirt, or small metallic particles which may be lodged in the cylinder outlet, which might be an explosion hazard, or obstruct or damage the regulator. A fiber nut must be used at this connection if medical cylinders are employed.

Before opening the valve of the oxygen cylinder, always be absolutely certain the flow-adjusting screw of the regulator is released. This is accomplished by turning it to the left until it is loose. Failure to observe this precaution may result in a broken regulator, a fire, or an explosion.

Whether the administration of oxygen will be of value to the patient can be determined only by direct experiment. The most reliable physical sign is the pulse rate, but color, breathing (dyspnea), temperature, respiratory rate and blood pressure may also facilitate the decision. Repeated observation of the pulse rate should precede exposure to a high concentration of oxygen; a flow of from 6 to 8 liters per minute is adequate when oropharyngeal methods are in use. The maximum fall in pulse rate is noted. This figure then becomes the criterion by which further administration is regulated. To determine the minimum flow of oxygen which is adequate, reduce the flow by half. If the pulse rate does not rise, a further similar reduction may be undertaken. Should the pulse rate rise after the reduction, the previous higher flow should be restored. By this method, waste of oxygen is eliminated, and the point at which the administration may be discontinued is automatically determined.

Any machine designated for the administration of gaseous anesthetics can be used for oxygen therapy. A simple assembly of a facial or nasal mask and a breathing bag serves the purpose. Provision must be made for the elimination of expired carbon dioxide ether by discharge through an expiration valve or by chemical absorption in a canister of soda lime.

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PART III - STATISTICAL

Evacuation:



1. Tabulated below are the number of patients evacuated from the major commands to the ZI during the five report weeks in July and the number of patients awaiting evacuation as of 29 July 1949:

	BY AIR	BY WATER	TOTAL	PNTS AWAIT EVACUATION
JAPAN	38	341	379	232
MARBO	46	8	54	0
PHILCOM	14	0	14	13
RYCOM	40	11	51	17
FEC	138	360	498	262

2. Evacuations of military personnel per thousand strength for the period of 25 June to 29 July were as follows:

JAPAN	3.0	PHILCOM	1.5
MARBO	3.1	RYCOM	2.2
FEC	2.8		

Hospitalization:

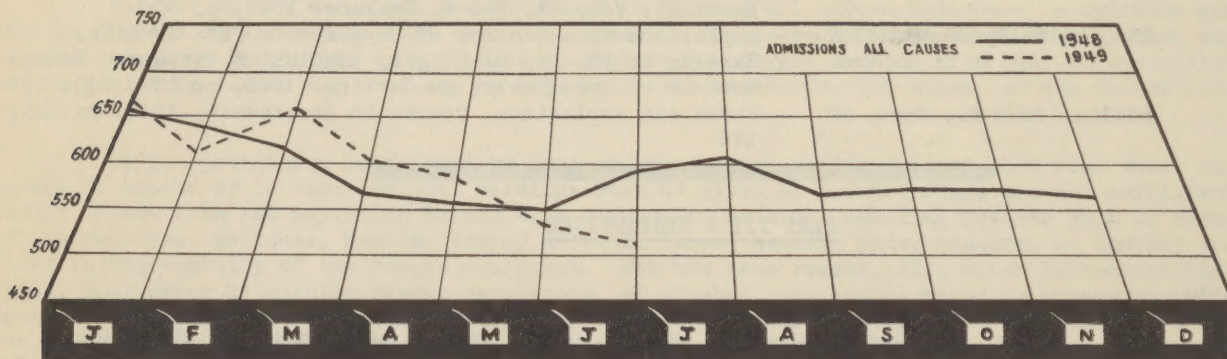
1. The Bed Status Report as of 29 July 1949 was as follows:

	Total T/O Beds Auth.	Total T/O Beds Establ.	Total T/O Beds Occupd.	% Auth. T/O Beds Occupd.	% of Establ. Beds Occupd.
JAPAN	4,650	4,368	1,944	42	45
MARBO	775	450	89	11	20
PHILCOM	1,250	1,250	927	74	74
RYCOM	750	443	182	24	41
FEC	7,425	6,511	3,142	42	48

2. Admission rates per thousand troops per annum for the five week period ending 29 July 1949 were as follows:

	FEC	JAPAN	MARBO	PHILCOM	RYCOM
All Causes	515	540	253	538	556
Disease	466	490	196	476	519
Injury	50	50	56	62	37
Psychiatric	11	12	9.0	21	8.5
Common Respiratory Diseases and Flu	41	48	25	81	0
Primary Atypical Pneumonia	5.1	4.9	0	0	11
Common Diarrhea	2.3	2.5	.70	5.9	.50
Bacillary Dysentery	.26	.09	0	2.9	.50
Amebic Dysentery	.13	0	0	2.9	0
Malaria, new	6.5	8.5	0	0	2.0
Infectious Hepatitis	2.2	2.6	0	5.9	0
Mycotic Dermatoses	5.2	6.9	.70	1.5	0
Rheumatic Fever	.45	.53	0	1.5	0
Venereal Diseases	181	186	15	126	294

HEALTH OF THE COMMAND



1. The general health of the troops in the FEC remained good during the month of July 1949. The admission rate for "all causes" continued to decline, from a rate of 539 per 1,000 per annum in June, an all time low for this command, to 515 for July.

2. Diseases: (a) The FEC admission rate for "all diseases" decreased to 466 in July from 487 in June. This is attributed to the notable decrease in "all diseases" in Japan as shown by the decreased rate of 547 in June to 490 for July.

(b) Malaria: There continues to be little evidence of transmission of malaria in Japan, most of the cases occurring among troops having had recent service in Korea. RYCOM again shows a substantial decrease in recorded cases of malaria. Only 4 new cases with a rate of 2.0 were reported for RYCOM in July as compared to 10 cases at a rate of 5.9 for the previous month, and 36 new cases or a rate of 18 for July 1948.

(c) Infectious Diseases of the Central Nervous System: There were 14 cases of poliomyelitis with 1 death reported in the month of July. All of these were from Japan. In July 1948, there were 30 cases reported with 3 deaths. Twenty-four of the cases and 2 of the deaths were reported from Japan at that time. Only 1 case suspected of being Japanese B encephalitis was admitted during July. This case, not yet confirmed, was an enlisted man from RYCOM. The 2 suspected cases of this disease in RYCOM as reported in the June report have now been confirmed, bringing the total number of confirmed cases of Japanese B encephalitis to 3, all from RYCOM. Cases of infectious diseases of the central nervous system discussed here include those reported on both military and civilian occupation personnel.

(d) Venereal Diseases: The total rate of venereal diseases for the FEC increased from the rate of 147 in June to 181 in July. Increases were noted in all major commands except MARBO. Surprise physical inspections conducted in both Japan and RYCOM probably account for at least a part of the increased reported incidence.

(e) Diarrhea and Dysentery: Diarrhea and dysentery continued to occur with low incidence during the month, the rate being 2.7 as compared with 2.4 for June and 21 for July 1948.

3. Non-Battle Injuries and Deaths: The rate for non-battle injuries in the FEC decreased from 52 in June to 50 in July. This decrease is attributed to a general decrease in all commands. During the five report weeks in July, 24 deaths due to non-battle injuries were reported in Army and Air Force military personnel of the FEC. There were 8 deaths due to diseases reported for the same period.

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The Chief Surgeon extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Capt. Vincent I. Hack, Editor